



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,261	01/14/2004	Gary Hillyard	HON-14923	4376
27504 7590 09/19/2007 RANKIN, HILL, PORTER & CLARK LLP 38210 Glenn Avenue WILLOUGHBY, OH 44094-7808			EXAMINER SMITH, RICHARD A	
			ART UNIT 2859	PAPER NUMBER
			MAIL DATE 09/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/757,261

Applicant(s)

HILLYARD ET AL.

Examiner

R. Alexander Smith

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-20 is/are allowed.
- 6) ☒ Claim(s) 21-28 is/are rejected.
- 7) ☒ Claim(s) 29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20040217.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

In this case, there are two consecutive claims numbered as 21, therefore misnumbered claims from the 2nd occurrence of claim 21 to claim 28 have been renumbered as claims 22-29 respectively. Furthermore, the dependencies for renumbered claims 23-25, 27 and 29 have been changed to be dependent from claims 22-24, 26 and 28 respectively. Renumbered claims 22, 26 and 28 have retained their original dependencies wherein each was dependent from claim 21.

Drawings

2. Figure 1 should be designated by a legend such as --Related Art-- because it is not prior art and does not show the invention therein to address the method claims. See MPEP § 608.02(g).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will

Art Unit: 2859

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 21, 26 and 27 is rejected under 35 U.S.C. 102(b) as being anticipated by US 4,483,618 to Hamar.

Hamar discloses a method of measuring a distance between first and second points on an object, said method comprising the steps of:

generating (via 16) a laser beam (18);

reflecting the laser beam such that the laser beam is divided into first and second portions that are disposed at a right angle to each other (via pentaprism not shown at 20 and then 20');
moving the first portion of the laser beam along a measurement path to a first measurement position that places the second portion of the laser beam at the first point on the object (at 20);

moving the first portion of the laser beam along the measurement path to a second measurement position that places the second portion of the laser beam at the second point on the object (at 20'); and

measuring the distance between the first and second measurement positions, which provides a measure of the distance between the first and second points on the object (Dm/Da see the paragraph starting at column 5 line 66),

wherein the measurement path is a straight line (as shown in figure 1),

wherein the step of measuring the distance between the first and second measurement positions is performed using a ruler (as shown).

Furthermore, Hamar discloses the laser beam striking the mirror (in a broad sense the pentaprism is a mirror) at about 45°.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to

the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamar in view of US 2,016,546 to Giebel.

Hamar teaches all that is claimed as discussed in the above rejections of claims 21, 26 and 27 except for

the steps of generating at least one light beam and reflecting the at least one light beam so as to illuminate the area around the object,

the steps of reflecting the laser beam and the at least one light beam is performed using a mirror,

wherein the angle of incidence of the laser beam striking the mirror is greater than the angle of incidence of the at least one light beam striking the mirror.

Giebel discloses a scribe pointing at a scale and teaches that ambient light or a generated light beam (36) can be reflected to the scale and the point of the scribe. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the steps, taught by Hamar, to include the steps of generating at least one light beam and reflecting

the at least one light beam so as to illuminate the area around the object using a mirror in order to help distinguish the area should it be dark, as suggested by Giebel.

With respect to the steps of reflecting the laser beam and the at least one light beam is performed using a mirror: Giebel discloses that the mirror is attached to the scribe and its clamping member, all of which move together. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the same reflective mirror or to include a mirror in the housing with the pentaprism, i.e., the entire housing can be considered as a mirror, in order to eliminate the need for a separate adjustment and the need to constantly reset the illumination each time the pentaprism and laser beam is moved.

With respect to the wherein the angle of incidence of the laser beam striking the mirror is greater than the angle of incidence of the at least one light beam striking the mirror: this limitation is only considered to be the "optimum" values of the relationship of the angle of incidence of the device disclosed by Hamar as modified by Giebel, as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on assuring that the area where the laser beam hits is consistently illuminated over the range that the laser beam moves. See In re Boesch, 205 USPQ 215 (CCPA 1980).

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamar in view of JP-217716 to Tei.

Hamar teaches all that is claimed as discussed in the above rejections of claims 21, 26 and 27 and further appears to show movement in the horizontal plane only.

Hamar does not teach wherein the first portion of the laser beam extends vertically and the second portion of the laser beam extends horizontally.

Tei discloses that a laser measuring device can move vertically and take measurements horizontally and that includes a means to manually position the laser in the vertical direction. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to alter the device and method, taught by Hamar, to have the first portion extend vertically and the second portion horizontally, as suggested by Tei, in order to increase the versatility and usefulness of the device to take measurements.

Allowable Subject Matter

Claims 1-20 are allowable.

Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related devices and methods.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



R. Alexander Smith
Primary Examiner
Technology Center 2800

RAS
September 14, 2007